

REMARKS

Specification

The Office Action objected to the specification because Application Serial No. 09/924,279, should be identified as having become U.S. Patent No. 6,759,862. The Applicant has amended the specification to incorporate that suggestion and respectfully requests acceptance of the amended specification.

Claim Objections

The Office Action objected to claims 2, 6, 23, 26 and 34 for various informalities. The Applicant has amended those claims to rectify each of those informalities. The Applicant respectfully requests withdrawal of those claim objections.

Claim Rejections – 35 U.S.C. §102(b)

Claims 1-23 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,867,809 (Soga et al.). The Applicant respectfully disagrees.

Claim 1 recites: 1) securing an electronic component to a circuit board, 2) recording data indicative of the secured component's exposure to an environmental condition and 3) determining, based on the recorded data, whether the secured component is suitable for exposure to conditions associated with securing a second electronic component to the circuit board. That feature is not disclosed in the Soga et al. patent.

Populating a circuit board with electronic components sometimes involves: 1) soldering a first component to the circuit board, 2) setting the circuit board (including the soldered first component) aside for some period of time and then, 3) soldering a second component to the same circuit board. An example of that shown in FIG. 2 where, a first set 206 of electronic components is soldered to a circuit board 202 using a first soldering process (which occurs at area 204). Then, the circuit board 202 (including the soldered first set 206 of electronic components) is set aside for some period of time (*see* page 7, line 28 – page 8, line 5). Subsequently, a second set 212 of electronic components is soldered to the same circuit board

202 (which occurs at area 220). When the circuit board is set aside after the first set 206 of electronic components has been soldered, the secured first set 206 of electronic components may be exposed, for example, to ambient moisture. If that exposure is too great, the secured components may be rendered susceptible to damage when they are later exposed to elevated temperatures when the second set 212 of electronic components is soldered to the same circuit board 202.

Implementations of the method recited in claim 1 may help identify whether an electronic component (previously secured to a circuit board) is subsequently exposed to excessive ambient moisture that could render it susceptible to damage when other components are soldered to the same circuit board. If such exposure has occurred, a user could take appropriate corrective measures to minimize the risk that a circuit board with compromised electronic components might be placed into service. The Soga et al. patent neither discloses nor suggests such a method.

Instead, the method disclosed in the Soga et al. patent includes simply estimating the remaining life of a printed circuit board based on its use history in an electric appliance and determining whether that printed circuit board should be recycled at the end of the electric appliance's life. (*See* column 1, lines 6-14) The method involves coupling a sensor to the electric appliance, which may be a household electric appliance, an information apparatus, or an industrial apparatus. The sensor is used to monitor various parameters (*e.g.* total time in operation and temperature) during the electric appliance's life. (*See* column 1, line 66-column 2, line 16)

The Soga et al. patent does not disclose determining whether an electronic component secured to a circuit board is suitable for exposure to conditions associated with securing a second electronic component to the same circuit board. Indeed, the Soga et al. patent has nothing to do with determining whether an electronic component secured to a circuit board is suitable for exposure to conditions associated with securing a second electronic component to the same circuit board.

Claim 1 should be allowable for at least the foregoing reasons.

Claims 2-23 depend from claim 1 and, therefore, should be allowable for at least the same reasons as claim 1.

Claim Rejections – 35 U.S.C. §103(a)

Claims 24-37 were rejected under 35 U.S.C. §103(a) as being unpatentable over the Soga et al. patent.

Claim 24 recites evaluating whether a first set of electronic components, previously soldered to a circuit board, is suitable for exposure to environmental conditions associated with reflow soldering a second set of electronic components to the same circuit board. For similar reasons as those discussed above with reference to claim 1, the Applicant submits that the Soga patent neither discloses nor suggests that feature.

Moreover, the Applicant submits that a person of ordinary skill in the art would not have been motivated to modify the disclosure of the Soga et al. patent to obtain the subject matter recited in claim 24.

A claimed invention is unpatentable due to obviousness if the differences between it and the prior art “are such that the subject matter as a whole would have been obvious at the time the invention was made to a person of ordinary skill in the art.” 35 U.S.C. § 103(a). Although a single prior art reference may, in appropriate circumstances, render a claim obvious, there must be showing of a suggestion or motivation to modify the teachings of that reference to the claimed invention in order to support the conclusion of obviousness. *In re Kotzab*, 217 F.3d 1365, 1370 (Fed. Cir. 2000) (reversing conclusion of obviousness).

A single line in a reference may not be taken out of context and relied upon with the benefit of hindsight to show obviousness. *Bausch & Lomb, Inc. v. Barnes-Hind/Hydrocurve, Inc.*, 796 F.2d 443, 448 (Fed. Cir. 1986). Similarly, boilerplate statements in a prior art reference that other embodiments and the like can be used are generally insufficiently specific to support a finding of obviousness. *See, e.g., Fromsom v. Anitec Printing Plates, Inc.*, 132 F.3d 1437, 1447 (Fed. Cir. 1997). Moreover, the mere fact that the prior art reference could be modified does not

satisfy the requirements for a finding of obviousness. *In re Laskowski*, 871 F.2d 115, 117 (Fed. Cir. 1989); *In re Mills*, 916 F.2d 680, 682 (Fed. Cir. 1990). Instead, the suggestion or motivation to modify the prior art must be "clear and particular." *See, e.g., C.R. Bard, Inc. v. M3 Sys., Inc.*, 157 F.3d 1340, 1352, (Fed. Cir. 1998); *Teleflex, Inc. v. Ficosa North Am. Corp.*, 299 F.3d 1313 (Fed. Cir. 2002).

The requirement of a clear and particular suggestion or motivation prevents the use of improper hindsight based, for example, on the applicant's own disclosure as a blueprint for forming a faulty obviousness argument. *See, e.g., In re Rouffet*, 149 F.3d 1350, 1357 (Fed. Cir. 1998); *Ecolochem, Inc. v. Southern California Edison Co.*, 56 USPQ2d 1065, 1072-73 (Fed. Cir. 2000).

In the present situation, the required suggestion or motivation for modifying the cited references to obtain the subject matter of claim 24 is lacking.

Claim 24 should be allowable for at least the foregoing reasons.

Claims 25-37 depend from claim 24 and, therefore, should be allowable for at least that reason.

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

No fee is believed to be due. However, please apply any other charges or credits to deposit account 06-1050.

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Serial No. : 10/783,846
Filed : February 20, 2004
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Attorney's Docket No.: 09215-011001

Respectfully submitted,

Date: October 3, 2005



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